REMARKS/ARGUMENTS

Applicant thanks the Examiner for the interview of February 1, 2006. In the interview, the Examiner indicated, *inter alia,* that the prior art of record failed to teach or suggest creating a macroinstruction using the same name as a set of instructions embedded in the macroinstruction. Support for this limitation includes page 3, lines 14-21; page 10, lines 2-4; page 11, lines 1-5;

The Examiner rejects claims 38-40, 43, 46-47, and 75 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. (U.S. 5,748,843) in view Davis (U.S. 6,816,837); claim 41 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Davis and further in view of Fitzpatrick et al. (U.S. 5,671,328); claims 42, 45, 48, 50, 53-54, 56, 58-64, 66-67, 69-72, and 76-77 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Davis and further in view of Johnson (U.S. 5,835,571); claim 44 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Davis and further in view of McAuliffe et al. (U.S. 6,212,541); claims 55 and 65 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Johnson and further in view of Fitzpatrick et al., claims 57 and 68 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Davis further in view of McAuliffe et al. and further in view of Johnson; and claims 73-74 under 35 U.S.C.§103(a) as being unpatentable over Peck et al. in view of Davis and further in view of Johnson and yet further in view of Hashimoto et al. (U.S. 5,632,002).

The cited references fail to teach or suggest at least the following italicized features of each independent claim:

> 38. A method, comprising:
> (a) *receiving, from a user, a first voice command for a proposed macroinstruction, the proposed macroinstruction having a respective set of embedded processor executable instructions, at least a subset of the embedded executable*

BEST AVAILABLE COPY

instructions being a nonmacroinstruction and having a corresponding second voice command, the first voice command being the same as the second voice command;

(b) *creating a macroinstruction as requested by the user, the created macroinstruction being invoked by the first voice command and comprising the subset of embedded executable instructions;*

(c) receiving, from a user, a spoken voice command;

(d) determining whether the spoken voice command corresponds to a macroinstruction having a respective set of embedded processor executable instructions;

(e) when the spoken voice command corresponds to a macroinstruction, executing the respective set of embedded executable instructions;

(f) when the spoken voice command does not correspond to a macroinstruction, *thereafter* determining whether the spoken voice command corresponds to a nonmacroinstruction; and

(g) when the spoken voice command corresponds to a nonmacroinstruction, executing the corresponding nonmacroinstruction, wherein the corresponding nonmacroinstruction has a respective subset of processor executable instructions and *wherein the spoken voice command can refer both to a macroinstruction and a nonmacroinstruction.*

51. A telecommunications system, comprising:

a switching system operable to configure and effect desired connections;

a voice recognition module operable to identify voice commands and macroinstruction names spoken by a user, the voice commands being nonmacroinstructions;

a macrolibrary operable to store macroinstructions and associated macroinstruction names;

a voice agent operable to:

(a) *receive, from a user, a first voice command for a proposed macroinstruction, the proposed macroinstruction having a set of embedded processor executable instructions, at least a subset of the embedded executable instructions being a nonmacroinstruction and having a corresponding second voice command, the first voice command being the same as the second voice command;*

(b) *create a macroinstruction as requested by the user, the created macroinstruction being invoked by the first voice command and comprising the subset of embedded executable instructions;*

(c) receive identified voice commands from the voice recognition module;

(d) associate the identified voice command with a corresponding set of executable instructions;

(e) receive a spoken voice command;

(f) *first* determine whether the spoken voice command corresponds to a macroinstruction having a respective set of nonmacroinstructions;

(g) when the spoken voice command corresponds to a macroinstruction, execute the respective set of nonmacroinstructions;

PAGE 16/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

(h) when the spoken voice command does not correspond to a macroinstruction, *second* determine whether the spoken voice command corresponds to a nonmacroinstruction; and

(i) when the spoken voice command corresponds to a nonmacroinstruction, execute the nonmacroinstruction.

62. A telecommunication system, comprising:

a voice agent operable to:

(a) *receive, from a user, at least a first voice command for a proposed macroinstruction, the proposed macroinstruction having a set of embedded processor executable instructions, at least a subset of the embedded executable instructions being a nonmacroinstruction and having a corresponding at least a second voice command, the at least a first voice command being the same as the at least a second voice command;*

(b) *create a macroinstruction as requested by the user, the created macroinstruction being invoked by the at least a first voice command and comprising the subset of embedded executable instructions;*

(c) receive at least at least a third voice command;

(d) *first* determine whether the at least a third voice command corresponds to a macroinstruction having a respective set of embedded executable nonmacroinstructions, each nonmacroinstruction having a corresponding voice command;

(e) when the at least a third voice command corresponds to a macroinstruction, execute the respective set of nonmacroinstructions;

(f) when the at least a third voice command does not correspond to a macroinstruction, *second* determine whether the at least a third voice command corresponds to a nonmacroinstruction; and

(g) when the at least a third voice command corresponds to a nonmacroinstruction, execute the nonmacroinstruction, *wherein a selected voice command can refer both to a macroinstruction and a nonmacroinstruction.*

In one embodiment, the present invention is directed to a voice portal that uses voice macros to invoke a number of discrete voice commands by speaking the word or phrase corresponding to the voice macro. In one configuration, the voice portal first determines whether a spoken word or phrase matches one or more sets of macroinstructions in the macrolibrary and second, if the word or phrase is not in the macrolibrary, processes the spoken work or phrase as a nonmacroinstruction. A macroinstruction or macrostatement or set of macroinstructions or macrostatements is an executable instruction or set of executable instructions that represents and/or is associated with one or more other executable instructions while a

PAGE 17/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

"nonmacroinstruction" is an executable instruction or a set of executable instructions that do not qualify as a macroinstruction or set of macroinstructions. For example, a macroinstruction is often composed of a number of nonmacroinstructions. By first determining if the word or phrase is in the macrolibrary and then processing the voice command as a nonmacroinstruction, the voice agent prevents system conflicts where a word or phrase references both macro- and nonmacroinstructions. It also permits a macroinstruction to be invoked by the same word or phrase as an embedded macroinstruction and/or nonmacroinstruction. In another configuration, the voice portal, when a macroinstruction is named by a user, executes the instructions corresponding to the macroinstruction simultaneously or substantially simultaneously.

Peck et al.

Peck et al. is directed to speech recognition control of apparel manufacture equipment. The operator can use a macro definition voice reference pattern to invoke verbally a series of digital control signals. That is, the computer, in response to the operator's command, records the order and timing of a series of verbal commands and executes the command sequence, in the proper order and at the proper timing, in response to a single operator command. Peck et al. uses a library of stored voice reference patterns and a separate operator specific library. The operator specific library includes both macroinstructions and nonmacroinstructions. Macroinstruction names are associated with a macro memory position instead of a digital control signal. It appears that nonmacroinstruction names or voice commands must be different from macroinstruction names to avoid system conflicts.

To invoke the macro capability, the operator must laboriously invoke a "macro" or learn mode and, to deactivate the capability, deactivate the learn mode. (Col. 12, lines 39-43.) In

PAGE 18/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

other words, the architecture of Peck et al. only searches for macroinstructions when and if the "learn" phrase is spoken by the user. When the "learn" phrase is spoken, it does not search the nonmacroinstruction or digital control signal portion of the operator specific library. (Col. 12, lines 32-67.)

Macroinstructions are created by activating the macro capability when the computer 14 is already in learn mode. In that event, the computer records the address, or position, of the digital control signal corresponding to the matched digitized voice reference pattern and the time between its selection and that of the prior digital control signal.

The Examiner refers to col. 11, line 65, to col. 12, line 54, as teaching executing a nonmacroinstruction when the first voice command does not correspond to a macroinstruction and executing the nonmacroinstruction when the first voice command corresponds to the nonmacroinstruction. Applicants disagree. *Peck et al. teaches that the treatment of a voice command as a macroinstruction or nonmacroinstruction is mode-driven.* The architecture of Peck et al. *only* looks at whether a voice command is a macroinstruction when the "learn" mode is in effect. It *only* looks at whether a voice command is a nonmacroinstruction when the "learn" mode is *not* in effect. (Col. 12, lines 32-54.) Peck et al. does not performs the steps of determining whether a voice command is a macroinstruction and, if not, whether the voice command is a nonmacroinstruction sequentially as claimed.

Davis

Davis is directed to a voice controlled capture device, such as a flatbed scanner, hand-held scanner, or digital scanning camera, contains a processor that receives voice macros to

PAGE 19/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

control its operation. The device receives voice input, digitizes and sends the input to a second processor in a host computer system where speech recognition software interprets the voice input to select a macro and returns commands from the macro to the capture device where they are executed. Using an interface or macro recorder within the capture device and the speech recognition software within the host computer, the user can create voice macros incorporating individual voice commands. Davis teaches the creation, edition, and deletion of voice macros through voice interaction with the user.

Contrary to the Examiner's statements, Davis fails to overcome the deficiencies of Peck et al. Davis also is directed to a mode-driven architecture in which a command is identified, by the mode in effect, as being either a macroinstruction or nonmacroinstruction. If the architecture is in the macroinstruction mode, it only compares an inputted voice string to strings in the voice macro command recognition table and, if the architecture is in the nonmacroinstruction mode, it only compares the inputted voice string to strings in the voice command recognition table.

Regarding the Examiner's description of Davis as permitting a user to "speak *any* word to invoke a macro command (Col. 5, lines 23-49)", Davis status that:

> [a] *unique* voice macro command is pronounced, usually a word or short phrase that has meaning to the user, which is then associated with the voice macro command vile containing the list of voice commands.

(Col. 2, lines 9-12.) At col. 2, lines 30-41, Davis provides an example in which the voice macro identifier was "OCR", which was different from each of the embedded voice nonmacroinstructions (which were "set color black and white", "set dpi 150", "set sharpening medium", "set type text", "scan", and "send to word." From these passages, the Examiner's statement is incorrect. The macroinstruction must be different not only from other

PAGE 20/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

macroinstruction identifiers but also from nonmacroinstruction identifiers, whether or not embedded in the macroinstruction.

Regarding the process for using macros, Davis states:

> Step 710 [of Figs. 7A and 7B] determines if a match was found in the comparison performed in step 708. If no match was found, then step 712 outputs an indication of no match to the user, which may be an audible word or a specific beep pattern for a stand alone unit, or, for a connected unit, a message displayed on graphics display 210 with or without an audible beep pattern. Control then returns to step 702 where input for a next voice macro command is received.

(Col. 9, lines 42-50; *see also* col. 10, lines 1-10, and 54-67.)

The fact that Davis returns an audible response for "no match" when an inputted voice string fails to match a macroinstruction identifier in the voice macro command recognition table establishes that no further comparison is performed to determine whether the voice string corresponds to a nonmacroinstruction. To provide a working system in which a user can access both macroinstructions and nonmacroinstructions and to be consistent with the teachings of Davis, the architecture must be mode-driven. Otherwise, once one macroinstruction is recorded and stored the user would be unable to access individually nonmacroinstructions unless they are accessed collectively through the macroinstruction.

Fitzpatrick et al.

Fitzpatrick et al. is directed to a method and processing system for automatically creating voice processing template entries. A number of commands or complex macro are assembled with one of the commands having a voice recognition criteria component associated with it. The system counts the occurrences of the commands, assembles voice recognition criteria components associated with the commands, and, when the count exceeds a selected minimum,

PAGE 21/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

constructs a voice recognition template entry or complex macro by associating the assembled voice recognition criteria components with the assembled commands. Each voice recognition criteria component of the template is associated with a conglomeration attribute (e.g., START, END, and NONE) and a macro and optional comment string. The voice recognition criteria component for each complex macro may be a concatenation of the separate voice recognition criteria components of the simpler macros from which the complex macro is created. (Col. 3, lines 13-20, and col. 4, lines 43-56.)

Johnson

Johnson is directed to a system for automatically interfacing a telephone user to an automated telephone service. Johnson teaches away from traditional macros and therefore teaches away from the present invention. (Col. 2, lines 14-17.) A macro is recorded, during a user's verbal negotiation of a menu, by saving a button type that is determined by the duration of the telephone button pressed, the button, and the time since press of the previous entry. In this manner, the user can invoke the saved recording of interface activity at any time so that the automated telephone service is interfaced to in an automatic manner. Thus, to record a macro the user must interface to an automated service and record the interaction. A macro can be invoked by button or voice.

The recording of the interaction is not a recording of voice commands, as claimed, but of DTMF signals. Buttons pressed along with time information between pressing of buttons is saved. Two types of DTMF buttons may be saved. A button of type IMMEDIATE will be used to the service without regard to prompting. A button type of WAIT will be issued to the service

PAGE 22/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

only after a moment of silence is detected. (Col. 3, lines 52-62.) When the desired macro is captured and the telephone macro is saved to a desired invocable sequence.

For example, multiple stock trades may be accomplished by repeating the following scenario: (1) a first macro to dial the telephone number and navigate to the desired point in the automated trading service menu; (2) a manually entered stock symbol; (3) a second macro to complete the trade; and (4) a third macro to navigate back to a navigation path where step 2 can be performed again. The macro is in a library of the contact center. It is not provided by the caller. This prevents the caller from waiting while a recorder plays a verbal response to each of the prompts, as described in Johnson.

McAuliffe et al.

McAuliffe et al. is directed to a computer implemented method and system for switching from one application to a second application. A user enters a "switch to" command, either directly or embedded within a macro. A determination is then made whether the application to be switched to is running. If the application is running, the focus of the operating system is switched to the second application. If the second application is not running, then the application is launched. When determining whether the application is running, determinations are made regarding whether the application is invisible or owned.

Hashimoto et al.

Hashimoto et al. is directed to a speech recognition interface system capable of handling a number of application programs simultaneously and realizing convenient speech input and output

PAGE 23/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

modes which are suitable for applications in the windows systems and speech mail systems. At cols. 37 and 38, Hashimoto et al. discloses a speech recognition interface system for accessing voice mail. Voice macros are disclosed at col. 38.

Accordingly, the pending claims are allowable.

The dependent claims provide further reasons for allowance.

By way of example, dependent claim 44 is directed to the use of a macroinstruction having one or more embedded macroinstructions. In other words, to invoke a second macroinstruction the name of a first macroinstruction must be spoken. This is not taught by Davis. Davis, at col. 2, lines 21-41, teaches nothing more than the structure of a conventional macro, namely a set of embedded nonmacroinstructions (e.g., "set color black and white", "set dpi 150", "set sharpening medium", "set type text", "scan", and "send to word"are the nonmacroinstructions and "OCR" is the macroinstruction). (See also claims 57 and 68.)

Applicant wishes to clarify the intended meaning of certain claim language in light of the Federal Circuit decision "SuperGuide Corporation v. DirecTV Enterprises, Inc., et al., 358 F.3d 870 (Fed. Cir. 2004). In that decision, the Federal Circuit held, under the unique facts of that case, that the phrase "at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type" means "at least one of a desired program start time, at least one of a desired program end time, at least one of a desired program service, and at least one of a desired program type".

Applicant has used the phrases "at least one of . . . and" and "and/or" in a number of claims and wishes to clarify to the Examiner the proper construction of this phrase. Applicant intended the phrases "at least one . . and" and "and/or" as used in the claims to be an open-ended

PAGE 24/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

expression that is both conjunctive and disjunctive in operation. For example, the expressions "at least one of A, B and C" and "A, B, and/or C" mean A alone, B alone, C alone, A and B together, A and C together, B and C together, and A, B and C together. Applicant believes that this construction is consistent with the Examiner's construction of the claims in the Office Action. If the Examiner disagrees with this construction, Applicant respectfully requests that the Examiner notify Applicant accordingly so that Applicant can further amend the claims.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: Douglas Swartz

Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: February 27, 2006

J:\4366\47\2nd Amcu & Response.wpd

PAGE 25/25 * RCVD AT 2/27/2006 5:25:52 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/11 * DNIS:2738300 * CSID:3038630223 * DURATION (mm-ss):07-44

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.